

Penumbra 

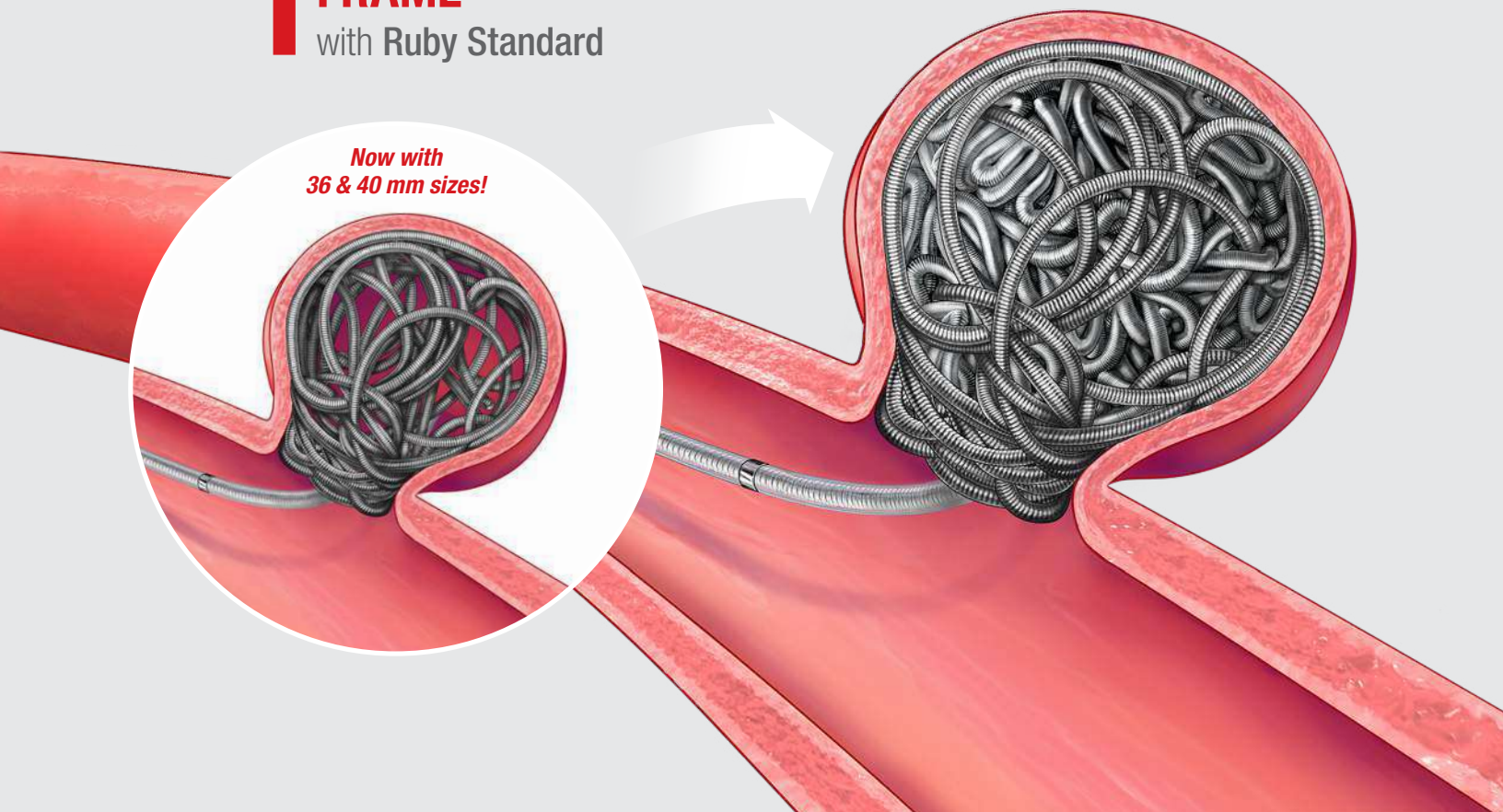


# EMBOLIZATION SYSTEM

# RUBY® COIL SYSTEM

**1 FRAME**  
with Ruby Standard

**2 FILL**  
with Ruby Soft



# POD® SYSTEM

**1 ANCHOR**  
with POD

Now designed to embolize  
3–14 mm vessels!

**2 PACK**  
with Packing Coil



# VOLUME ADVANTAGE<sup>a</sup>



**30 cm Ruby<sup>®</sup> Coil**

**27%**  
Packing



**30 cm Conventional Detachable Coil**

**12%**  
Packing

a. 7.5 mm glass aneurysm. Tests performed and data on file at Penumbra, Inc. Bench test results may not be indicative of clinical performance.

# SOFTNESS ADVANTAGE

**20 cm 18-system competitor coil in glass model<sup>c</sup>**



0 cm

1 cm



**30 cm large volume soft coil in glass model<sup>d</sup>**

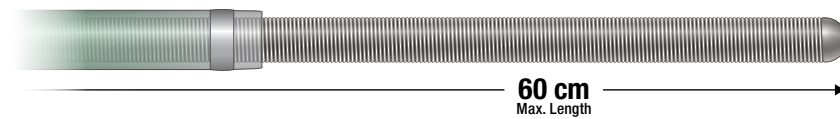


**Soft coils pack, forming dense metal occlusion.**

c. Terumo<sup>™</sup> AZUR<sup>®</sup> CX Coil 4 mm x 20 cm delivered through Terumo Progreat<sup>®</sup> Microcatheter into 4 mm glass tube.  
d. 30 cm POD Packing Coil delivered through Penumbra LANTERN<sup>®</sup> High-Flow Microcatheter into 4 mm glass tube. Photographs taken by and on file at Penumbra, Inc. Bench test results may not be indicative of clinical performance.

## ONLY COIL TO PROVIDE 60 CM LENGTH AND .020" THICKNESS

**Ruby Coil**  
LANTERN<sup>®</sup> Microcatheter

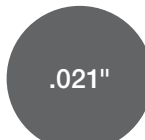
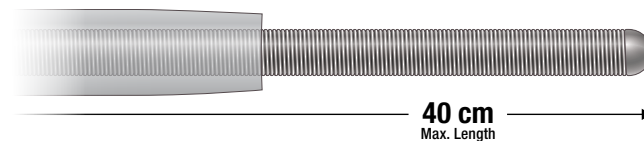


Coil Thickness



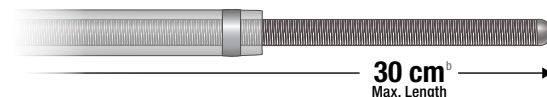
.020"

**Conventional 35 Coil**  
035 diagnostic catheter



.021"

**Conventional 18 Coil**  
18 microcatheter



.012"

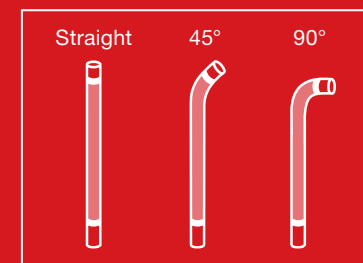
b. Based on 8 mm coil.

## LANTERN MICROCATHETER

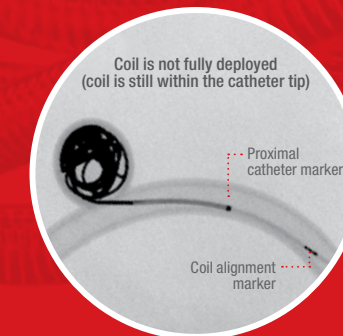
## PRECISE COIL DETACHMENT

Ruby and POD<sup>®</sup> are the only coils designed to be delivered through a LANTERN High-Flow Microcatheter.

### TIP SHAPES



Ruby Coil deployed from LANTERN High-Flow Microcatheter



Coil is not fully deployed (coil is still within the catheter tip)

Proximal catheter marker

Coil alignment marker

Ruby and POD are fully retractable and resheathable, enabling user to achieve ideal placement in the target vessel.



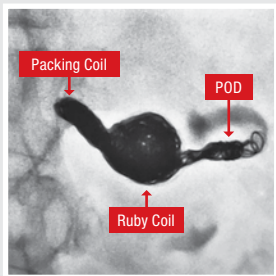
Coil fully deployed and ready to be detached

Coil alignment marker passes proximal catheter marker to form "T," indicating that Ruby or POD can now be detached.

Photographs taken by and on file at Penumbra, Inc. Bench test results may not be indicative of clinical performance.

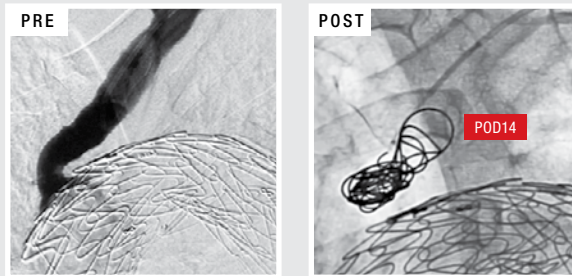
# EMBOLIZATION SYSTEM CASES

## Splenic Artery Embolization



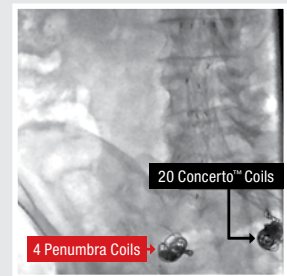
Dr. Thomas Aquisto  
Evanston Hospital, IL

## Left Subclavian Embolization



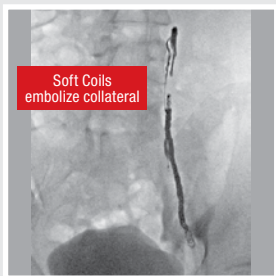
Dr. Frank Arko  
Atrium Health, NC

## Bilateral Iliac Embolization



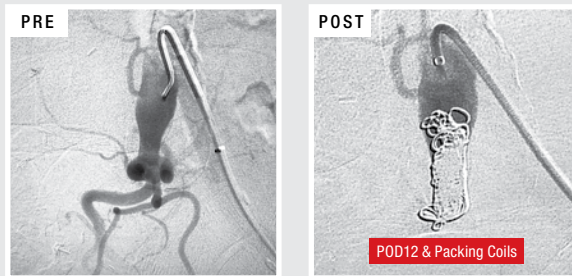
Dr. Herbert Cordero  
St. Rose Dominican Siena Campus, NV

## Pelvic Congestion Syndrome



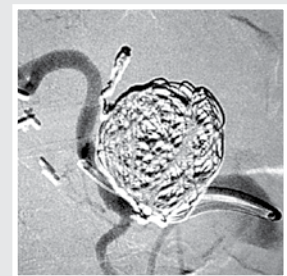
Dr. Parag J. Patel  
Medical College of Wisconsin, WI

## Hypogastric Artery Embolization



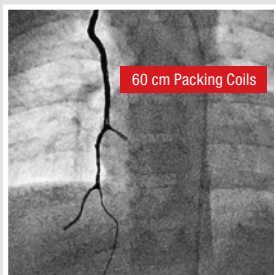
Dr. Corey Teigen  
Sanford Health, ND

## Hepatic Artery Aneurysm



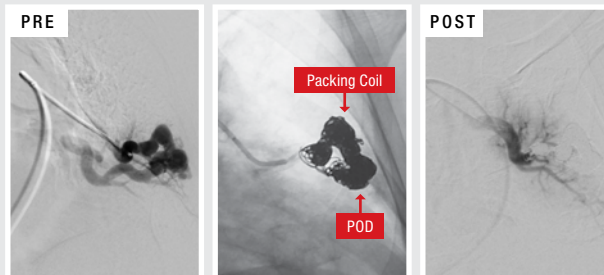
Dr. James Benenati  
Miami Cardiac and Vascular Institute, FL

## Pre Fontan Embolization



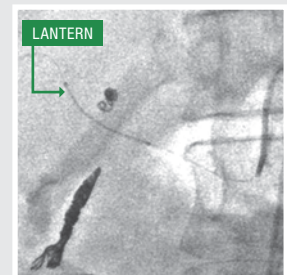
Dr. Saar Danon  
Cardinal Glennon Children's Hospital, MO

## Pulmonary AVM



Dr. Mahmood Razavi  
St. Joseph Hospital, CA

## GDA & Gastric Embolization



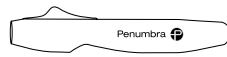
Dr. Dmitri Samoilo  
Medical Center Radiologists, VA

# ORDERING INFORMATION

## RUBY COIL SYSTEM

| COMPLEX STANDARD<br>Frame |                         |             | COMPLEX SOFT<br>Fill |                         |             |
|---------------------------|-------------------------|-------------|----------------------|-------------------------|-------------|
|                           |                         |             |                      |                         |             |
| Catalog Number            | Secondary Diameter (mm) | Length (cm) | Catalog Number       | Secondary Diameter (mm) | Length (cm) |
| RB2C0305                  | 3                       | 5           | RB4C0201             | 2                       | 1           |
| RB2C0312                  |                         | 12          | RB4C0202             |                         | 2           |
| RB2C0320                  |                         | 20          | RB4C0204             |                         | 4           |
| RB2C0410                  | 4                       | 10          | RB4C0305             | 3                       | 5           |
| RB2C0420                  |                         | 20          | RB4C0315             |                         | 15          |
| RB2C0435                  |                         | 35          | RB4C0406             |                         | 6           |
| RB2C0512                  | 5                       | 12          | RB4C0415             | 4                       | 15          |
| RB2C0530                  |                         | 30          | RB4C0620             |                         | 20          |
| RB2C0620                  |                         | 20          | RB4C0630             |                         | 30          |
| RB2C0630                  | 6                       | 30          | RB4C0835             | 8                       | 35          |
| RB2C0725                  |                         | 25          | RB4C0860             |                         | 60          |
| RB2C0825                  |                         | 25          | RB4C1650             |                         | 50          |
| RB2C0840                  | 8                       | 40          | RB4C2060             | 20                      | 60          |
| RB2C1035                  |                         | 35          |                      |                         |             |
| RB2C1260                  |                         | 60          |                      |                         |             |
| RB2C1460                  | 14                      | 60          |                      |                         |             |
| RB2C1660                  | 16                      | 60          |                      |                         |             |
| RB2C1857                  | 18                      | 60          |                      |                         |             |
| RB2C2060                  | 20                      | 60          |                      |                         |             |
| RB2C2457                  | 24                      | 60          |                      |                         |             |
| RB2C2860                  | 28                      | 60          |                      |                         |             |
| RB2C3260                  | 32                      | 60          |                      |                         |             |
| RB2C3660 - Now!           | 36                      | 60          |                      |                         |             |
| RB2C4060 - Now!           | 40                      | 60          |                      |                         |             |

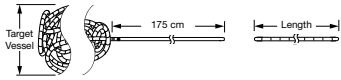
### DETACHMENT HANDLE



| Catalog Number | Description       |
|----------------|-------------------|
| RH1            | Detachment Handle |

### POD

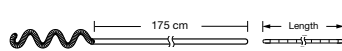
High-Flow Vessel Sacrifice



| Catalog Number  | Product | Target Vessel (mm) | Length (cm) |
|-----------------|---------|--------------------|-------------|
| RBYP0D3 - Now!  | POD3    | 3                  | 20          |
| RBYP0D4         | POD4    | 3.25-4             | 30          |
| RBYP0D5         | POD5    | 4-5                | 30          |
| RBYP0D6         | POD6    | 5-6                | 50          |
| RBYP0D8         | POD8    | 6-8                | 60          |
| RBYP0D10 - Now! | POD10   | 8-10               | 60          |
| RBYP0D12 - Now! | POD12   | 10-12              | 60          |
| RBYP0D14 - Now! | POD14   | 12-14              | 60          |

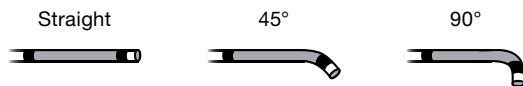
### POD PACKING COIL

Pack Behind Ruby or POD Backstop



| Catalog Number   | Product                       | Length (cm) |
|------------------|-------------------------------|-------------|
| RBYP0D.J5 - Now! | POD Packing Coil J-Soft 5 cm  | 5           |
| RBYP0D.J15       | POD Packing Coil J-Soft 15 cm | 15          |
| RBYP0D.J30       | POD Packing Coil J-Soft 30 cm | 30          |
| RBYP0D.J45       | POD Packing Coil J-Soft 45 cm | 45          |
| RBYP0D.J60       | POD Packing Coil J-Soft 60 cm | 60          |

### LANTERN Delivery Microcatheter



| Catalog Number  | Tip Shape | Length (cm) | ID (in) |
|-----------------|-----------|-------------|---------|
| PXSLIMLAN115STR | Straight  | 115         | .025    |
| PXSLIMLAN115T45 | 45°       |             |         |
| PXSLIMLAN115T90 | 90°       |             |         |
| PXSLIMLAN135STR | Straight  | 135         | .025    |
| PXSLIMLAN135T45 | 45°       |             |         |
| PXSLIMLAN135T90 | 90°       |             |         |
| PXSLIMLAN150STR | Straight  | 150         | .025    |
| PXSLIMLAN150T45 | 45°       |             |         |
| PXSLIMLAN150T90 | 90°       |             |         |

#### Indication For Use

The Ruby Coil System is indicated for arterial and venous embolizations in the peripheral vasculature.

#### Contraindications

There are no known contraindications.

#### Warnings

The Ruby Coil System should only be used by physicians who have received appropriate training in interventional techniques.

#### Precautions

- The device is intended for single use only. Do not sterilize or reuse. Resterilization and/or reuse may compromise the structural integrity of the device or increase the risk of contamination or infection leading to device failure and/or cross-infection and potential patient injury, illness or death.
- Do not use kinked or damaged devices. Do not use opened or damaged packages. Return all damaged devices and packaging to the manufacturer/distributor.
- Use prior to the "Use By" date.
- Use device in conjunction with fluoroscopic guidance.
- Do not advance or withdraw the device against resistance without careful assessment of the cause using fluoroscopy.

- Moving or torquing the device against resistance may result in damage to the vessel or device.
- Maintain a constant infusion of an appropriate flush solution.

#### Potential Adverse Events

Possible complications include but are not limited to: acute occlusion; air embolism; allergic reaction and anaphylaxis from contrast media; aneurysm rupture; arteriovenous fistula; coagulopathy; coil herniation into parent vessel; death; device malfunction; distal embolization; emboli; embolic stroke and other cerebral ischemic events; false aneurysm formation; hematoma or hemorrhage at access site of entry; incomplete aneurysm occlusion; infection; intima dissection; intracranial hemorrhage; ischemia; myocardial infarction; neurological deficits including stroke; parent artery occlusion; peripheral thromboembolic events; post-embolization syndrome; premature device detachment; recanalization; renal failure; respiratory failure; revascularization; thromboembolic episodes; vessel spasm, thrombosis, dissection, or perforation.

#### Indication For Use

For POD Coils with nominal sizes ≤ 6 mm

The POD System is indicated for the embolization of:

- Intracranial aneurysms
- Other neurovascular abnormalities such as arteriovenous malformations and arteriovenous fistulae
- Arterial and venous embolizations in the peripheral vasculature

For POD Coils with nominal sizes > 6 mm

The POD System is indicated for arterial and venous embolizations in the peripheral vasculature

- Use prior to the "Use By" date.
- Use device in conjunction with fluoroscopic guidance.
- Do not advance or retract the device against resistance without careful assessment of the cause using fluoroscopy. If POD cannot be advanced or retracted, withdraw the device as a unit with the microcatheter.
- Moving or torquing the device against resistance may result in damage to the vessel or device.
- Maintain a constant infusion of an appropriate flush solution.

#### Potential Adverse Events

Potential complications include but are not limited to: acute occlusion; air embolism; allergic reaction and anaphylaxis from contrast media; coagulopathy; coil herniation into parent vessel; death; device malfunction; distal embolization; emboli; embolic stroke and other cerebral ischemic events; false aneurysm formation; hematoma or hemorrhage at access site of entry; incomplete aneurysm occlusion; infection; intima dissection; intracranial hemorrhage; ischemia; myocardial infarction; neurological deficits including stroke; parent artery occlusion; peripheral thromboembolic events; post-embolization syndrome; premature device detachment; recanalization; renal failure; respiratory failure; revascularization; thromboembolic episodes; vessel spasm, thrombosis, dissection, or perforation.

#### Contraindications

There are no known contraindications.

#### Warnings

The POD System should only be used by physicians who have received appropriate training in interventional techniques.

#### Precautions

- The device is intended for single use only. Do not sterilize or reuse. Resterilization and/or reuse may compromise the structural integrity of the device or increase the risk of contamination or infection leading to device failure and/or cross-infection and potential patient injury, illness or death.
- Do not use kinked or damaged devices. Do not use opened or damaged packages. Return all damaged devices and packaging to the manufacturer/distributor.

#### Indication For Use

The Penumbra Delivery Microcatheters are intended to assist in the delivery of diagnostic agents, such as contrast media, and therapeutic devices, such as occlusion coils to the peripheral and neuro vasculature.

#### Contraindications

There are no known contraindications.

#### Warnings

The Penumbra Delivery Microcatheters should only be used by physicians who have received appropriate training in interventional techniques.

#### Precautions

- The devices are intended for single use only. Do not sterilize or reuse. Resterilization and/or reuse may result in ineffective catheter coating lubrication, which may result in high friction and the inability to access the target location.
- Do not use kinked or damaged devices. Do not use open or damaged packages. Return all damaged devices and packaging to the manufacturer / distributor.
- Use prior to the "Use By" date.
- Use the Penumbra Delivery Microcatheters in conjunction with fluoroscopic visualization.

#### Potential Adverse Events

Possible complications include, but are not limited to, the following: acute occlusion; hematoma or hemorrhage at access site; death; intracranial hemorrhage; hemorrhage; infection (at access site); distal embolization; ischemia (cardiac and/or cerebral); embolus (air, foreign body, thrombus, plaque); aneurysm perforation; false aneurysm formation; neurological deficits including stroke; vessel spasm, thrombosis, dissection, perforation or rupture; air embolism; emboli.

#### Penumbra, Inc. USA

One Penumbra Place

Alameda, CA 94502

USA

1.888.272.4606

T 1.510.748.3200

F 1.510.748.3232

order@penumbrainc.com

info@penumbrainc.com

Penumbra



www.penumbrainc.com

Caution: Federal (USA) law restricts these devices to sale by or on the order of a physician. Prior to use, please refer to the Instructions for Use for Ruby Coil System, POD System, and Penumbra Delivery Microcatheters for complete product indications, contraindications, warnings, precautions, potential adverse events, and detailed instructions for use. Photographs taken by and on file at Penumbra, Inc. Tests performed and data on file at Penumbra, Inc. Bench test results may not be indicative of clinical performance. Renderings for illustrative purposes only. Individual results may vary depending on a variety of patient-specific attributes. Images used with permission. Consents on file at Penumbra, Inc. Please contact your local Penumbra representative for more information.

Copyright ©2017–2018 Penumbra, Inc. All rights reserved. The Penumbra P logo, Ruby, POD, and LANTERN are registered trademarks or trademarks of Penumbra, Inc. in the USA and other countries. All other trademarks are the property of their respective owners. 11533, Rev. C 08/18 USA